

AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** An electric motor characterized by comprising:

a motor housing having an inner circumferential face and paired permanent magnets fixed to the inner circumferential face;

an armature core attached to a rotation shaft, having plural an even number of teeth radially extending in radial directions, and plural an even number of slots formed between teeth and extending along an axis direction;

a commutator provided on the rotation shaft to be and being adjacent to the armature core, with and having commutator members arranged in a circumferential direction, the commutator members being equal in number to the slots;

a first brush which slides on the commutator members of the commutator;

a second brush which is provided apart from the first brush by a predetermined angle in a circumferential direction, and slides on configured to slide on the commutator members of the commutator;

a third brush, provided at a position opposed to the first brush, configured to slide on the commutator members of which slides on the commutator and is used with either the first or second brush such that a current is alternatively supplied between the first brush and the third brush or between the second brush and the third brush, wherein when the current is supplied between the first brush and the third brush, the armature core rotates at a lower rotation speed than a rotation speed of the armature core when the current is supplied between the second brush and the third brush; and

an armature coil which is electrically connected between adjacent ones of the commutator members, said armature coil having a first coil wound between the slots and a surrounding plurality of teeth, given ones of the slots, and a second coil, which is wound in an opposite direction to a direction of the first coil between the slots existing and another plurality of teeth located at positions point-symmetric to the given ones of the slots teeth around which the first coil is wound with respect to a center of the rotation shaft, the armature coil being configured

~~such that when the second brush contacts the adjacent ones of the commutator members to short-circuit the first and second coils through the second brush, the first and second coils exist at symmetric positions with respect to an axis line extending through a center of the second brush and the center of the rotation shaft;~~

wherein the second coil surrounds the same number of teeth as the first coil and is wound in a direction opposite to a direction in which the first coil is wound, and the first and second coils are wound by an equal number of turns and are connected in series with each other.

2-17. **(Cancelled)**

18. **(New)** An electric motor comprising:

a motor housing having an inner circumferential face and paired permanent magnets fixed to the inner circumferential face;

an armature core attached to a rotation shaft, having an even number of teeth radially extending in radial directions, and an even number of slots formed between teeth and extending along an axis direction;

a commutator on the rotation shaft and being adjacent to the armature core, and having commutator members arranged in a circumferential direction, the commutator members being equal in number to the slots;

a first brush which slides on the commutator members of the commutator;

a second brush provided apart from the first brush by a predetermined angle in a circumferential direction, and configured to slide on the commutator members of the commutator;

a third brush, provided at a position opposed to the first brush, configured to slide on the commutator members of the commutator such that a current is selectively supplied between the first brush and the third brush or between the second brush and the third brush, wherein when the current is supplied between the first brush and the third brush, the armature core rotates at a

lower rotation speed than a rotation speed of the armature core when the current is supplied between the second brush and the third brush; and

an armature coil electrically connected between adjacent ones of the commutator members, said armature coil having a first coil wound between the slots and a surrounding plurality of teeth, and a second coil, wound between the slots and another plurality of teeth located at positions point-symmetric to the teeth around which the first coil is wound with respect to a center of the rotation shaft;

wherein the second coil surrounds the same number of teeth as the first coil and is wound in a direction opposite to a direction in which the first coil is wound, and the first and second coils are wound by an equal number of turns and are connected in series with each other.